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ADHERENCE TO DRUG TREATMENT IN PATIENTS WITH HYPERTENSION WITH VERY HIGH CARDIOVASCULAR RISK

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Hypertension (HTN) is a major risk factor for cardiovascular and cerebrovascular disease. However, only 37% of US patients with HTN and 12% to 36% of European patients with HTN achieve adequate blood pressure (BP) control. These suboptimal BP control rates contribute to the 7.1 million premature deaths attributed to HTN per year. One of the leading causes of suboptimal BP control is non-adherence to pharmacotherapy. Adherence to treatment is a complex process, and there are several barriers to its observance. An increase in the number of medications, which leads to polypharmacy, increases the level of non-adherence. It is also known that 20-30% of new prescriptions are not fulfilled by patients. This is especially important in patients with HTN at very high cardiovascular risk (CVR), who, in addition to antihypertensive treatment, need lipid-lowering agents, disaggregants, etc. Polypill is a technological innovation that is expected to improve treatment adherence by simplifying the pharmacotherapy regimen [1-3].

The aim of the study was to evaluate the adherence to treatment of patients with HTN with very high total CRP when using polypill.

The study included 42 patients (61.9% men, mean age 61 years) with very high total CVR with pre-existing atherosclerotic cardiovascular disease, which, along with antihypertensive therapy, required additional prescription of antiplatelet drugs (aspirin) as part of secondary prevention and statins. At the screening of the study, all patients were taking two antihypertensive drugs (ACE inhibitor + thiazide/thiazide-like diuretic or ACE inhibitor + calcium antagonist), 20 (47.6%) were additionally taking a statin, and only 11 patients (26, 2 %) received combined antihypertensive therapy, statin and aspirin, and therefore 31 patients (73.8 %) required escalation of pharmacologic treatment with aspirin or aspirin/statin. All patients were provided with recommendations for lifestyle modification. During randomization, the treatment assigned for inclusion in the study was modified: in the first group (n=20) of patients, polypill therapy (triple combination of aspirin+atorvastatin+ramipril) in combination

with amlodipine was initiated, and the second group of patients (n=22) started treatment with a quadruple combination of mono drugs: aspirin+atorvastatin+ramipril+amlodipine. Thus, patients in the second observation group received twice as many pills per day compared to the first cohort (4 vs. 2). Patients of both groups were comparable in terms of age and gender, duration of history of HTN, etc. The median follow-up was 12 months. Adherence to treatment, along with a simple mathematical calculation of the number of pills taken over a certain period, was assessed using the Morisky-Greene 4-item Medication Adherence Scale at the last visit. The subjects were divided into groups according to the number of points scored: 4 points - with high adherence to treatment; 2-3 points - with medium; 1 point - with low adherence to treatment, respectively.

After 12 months of follow-up, patients in the first group had greater adherence to treatment compared with subjects who did not take polypill (80% vs. 50%). At the same time, when assessing compliance with the Morisky-Green questionnaire, none of the patients in either group scored the maximum possible score, indicating that there were no fully adherent patients. According to the degree of adherence to treatment, patients were distributed as follows: in the first and second observation groups, 19 (95%) and 13 (59%) patients demonstrated average adherence to treatment.

The proportion of patients with low adherence was significantly higher (41%) in the cohort of patients who did not receive a fixed combination of drugs in one pill. The results of most existing clinical trials and large meta-analyses support the clinical and pharmacoeconomic feasibility of polypill use in the treatment of various cardiovascular diseases, including HTN. Poor adherence to treatment is associated with higher BP levels compared to patients who are adherent to their medication regimen. Improving adherence in patients with HTN and very high systolic BP by using a polypill strategy is likely to contribute to both faster achievement of target BP levels and a reduction in the incidence of fatal and nonfatal cardiovascular events.

Conclusions: adherence to treatment in patients with HTN with a very high total CVR who received polypill was significantly higher compared with patients who received standard therapy with a combination of monocomponent drugs.

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